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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/565,532 | 04/03/2006 | Toshiyuki Aritake | 206560203676USO | 2421 |

7278 7590 07/26/2007
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| EXAMINER |
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CHEN, VIVIAN

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| ART UNIT | PAPER NUMBER |
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1773

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| MAIL DATE | DELIVERY MODE |
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07/26/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|---------------------------------------|--|
| Office Action Summary | Application No. 10/565,532 | Applicant(s) ARITAKE ET AL. | |
| | Examiner Vivian Chen | Art Unit 1773 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Specification

1. The amendment filed 1/18/2006 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: in the specification, page 31, the newly added text regarding particle size.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 10-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 10, 12 recites the limitation "the inorganic deposited film". There is insufficient antecedent basis for this limitation in the claims.

Claim Rejections - 35 USC § 103

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3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 9-10, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over:

OYA ET AL (US 6,153,276) or JP 10-151715 (JP '715),

OYA ET AL and JP '715 each disclose a multilayer film suitable for packaging, wherein the film comprises a first layer comprising an amorphous polylactic acid resin and a second layer comprising a crystalline polylactic acid resin. The amorphous polylactic acid resin has a L/D mol ratio of 93/7 to 7/93. The crystalline polylactic acid resin has a L/D mol ratio of 100/0 to 97/3 or 3/97 to 0/100. The film is typically formed by coextrusion of the two polylactic acid resin layers, biaxially oriented, optionally followed by deposition of a metallic or metal oxide layer. (OYA ET AL, entire document, e.g., column 1; line 10-32, col. 8; line 10-23, col. 10; etc.) (see corresponding portions of JP '715)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply conventional inorganic layers (e.g., aluminum, silicon, oxides thereof, etc.) (claims 10, 12) to the films of OYA ET AL or JP '715 in order to improve the barrier properties of the multilayer films. Since in the films of OYA ET AL and JP '715, the amorphous polylactic acid resin layer contains no crystalline polylactic acid resin and the crystalline polylactic acid resin layer contains no amorphous polylactic acid resin, and since the claims do not specify a minimum amount of either amorphous or crystalline polylactic acid

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resins, the recited limitations regarding the relative amounts of amorphous and crystalline polylactic acid resins in each layer have been satisfied (claims 1, 2, 4).

5. Claims 4-8, 11, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over:
OYA ET AL (US 6,153,276) or JP 10-151715 (JP '715),
as applied to claims 1-3, 9-10, 12 above,
and further in view of JP 2003-062933 (JP '933).

JP '933 discloses that it is well known in the art to apply an anchor coat to polylactic acid resin films, followed by the application of an inorganic layer (e.g., aluminum, titanium, alloys thereof, etc.) to improve adhesion of the inorganic layer to a biodegradable film. (entire document, e.g., Abstract; paragraphs 39, 43, etc.)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use known adhesion-promoting methods such as an anchor coat in order to improve the adhesion between the laminates of OYA ET AL or JP '715 and subsequently applied in organic layers. It is also well known in the art to apply adhesion-promoting coatings after film orientation (e.g., off-line coating) (claim 5), in order to allow the film to be subjected to additional surface treatments and/or processing avoiding possible detrimental effects to the anchor coating. One of ordinary skill in the art would have selected the specific composition of the inorganic layer (claim 7, 11, 13) depending on the specific visual, optical, barrier, and/or other physical properties required for specific end-uses.

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Conclusion

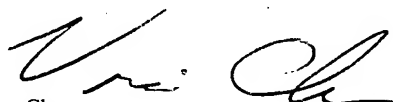
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vivian Chen whose telephone number is (571) 272-1506. The examiner can normally be reached on Monday through Thursday from 8:30 AM to 6 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney, can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

The General Information telephone number for Technology Center 1700 is (571) 272-1700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

July 18, 2007


Vivian Chen
Primary Examiner
Art Unit 1773